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=> file medline caplus scisearch biosis biotechno	COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
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FILE 'MEDLINE' ENTERED AT 15:17:14 ON 13 MAR 2002

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FILE 'BIOTECHNO' ENTERED AT 15:17:14 ON 13 MAR 2002  
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=> s plant and indolicidin  
L1 4 PLANT AND INDOLICIDIN

=> s indolucidin  
L2 0 INDOLUCIDIN

=> s indolicidin  
L3 288 INDOLICIDIN

=> dup rem 11  
PROCESSING COMPLETED FOR L1  
L4 4 DUP REM L1 (0 DUPLICATES REMOVED)

=> s l3 and agriculture  
L5 1 L3 AND AGRICULTURE

=> s l3 and agricultural  
L6 1 L3 AND AGRICULTURAL

=> s l3 and agronomic  
L7 1 L3 AND AGRONOMIC

=> s l4 or l5 or l6 or l7  
L8 4 L4 OR L5 OR L6 OR L7

=> d ab 1-4

L8 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2002 ACS  
AB Disclosed are peptides that have enhanced stability against **plant** proteases and are useful in the control of **plant** diseases. The peptides also have the ability to protect other peptides, polypeptides or proteins from degrdn. by proteases of **plant**, fungal, viral, bacterial, insect or other origin. **Indolicidin** exhibits remarkable resistance to proteolysis by proteases; the reverse peptide of **indolicidin** (designated Rev4, Arg-Arg-Trp-Pro-Trp-Pro-Trp-Lys-Trp-Pro-Leu-Ile) and derivs and analogs of **indolicidin** and Rev4 share these properties while maintaining antimicrobial properties. Exogenous or non-native peptides, polypeptides and proteins of

**agronomic** interest exhibit greater resistance to degrdn. by multiple classes of proteases that have different active sites and substrate specificities in the presence of **indolicidin**, Rev4 and related structures. DNA encoding the peptides of the present invention can be co-expressed with other DNA encoding exogenous peptides in transgenic plants as a method for protecting foreign peptides from degrdn. by proteases. Thus, a synthetic gene (RIL) is constructed encoding the Rev4 peptide fused to a secretion signal peptide from tobacco PR-1b protein, and used to show increased bacterial and fungal pathogen resistance in transgenic plants. Also disclosed are nucleic acid sequences, microorganisms, plants, and compns. useful for the treatment of **plant** diseases.

L8 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2002 ACS

AB The present invention features a method for isolating and purifying viruses, proteins and peptides of interest from a **plant** host which is applicable on a large scale. Moreover, the present invention provides a more efficient method for isolating viruses, proteins and peptides of interest than those methods described in the prior art. In general, the present method of isolating viruses, proteins and peptides of interest comprises the steps of homogenizing a **plant** to produce a green juice, adjusting the pH of and heating the green juice, sepg. the target species, either virus or protein/peptide, from other components of the green juice by one or more cycles of centrifugation, resuspension, and ultrafiltration, and finally purifying virus particles by such procedure as PEG-pptn. or purifying proteins and peptides by such procedures as chromatog. and/or salt pptn. The invention also concerns transgenic plants and the isolation of viral proteins and/or other fusion proteins.

L8 ANSWER 3 OF 4 SCISEARCH COPYRIGHT 2002 ISI (R)

AB **Indolicidin** is a cationic 13 amino acid peptide amide produced in the granules of bovine neutrophils with the sequence H-ILPKWPWWPWR-NH<sub>2</sub>. **Indolicidin** is both antimicrobial and, to a lesser extent, haemolytic. In order to systematically investigate structure-function relationships, the solid-phase synthesis of **indolicidin** and 48 distinct analogues are reported, as well as the characterization of their respective biological properties. Peptides synthesized and characterized include analogues with modified terminal functions, truncations from either terminus, an alanine scan to determine the role of each individual amino acid, specific amino acid exchanges of aromatic, charged and structural residues and several retro, inverso- and retroinverso-analogues. Together, characterization of these analogues identifies specific residues involved in antimicrobial or haemolytic activity and suggests a core structure that may form a scaffold for the further development of peptidomimetic analogues of **indolicidin**.  
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L8 ANSWER 4 OF 4 SCISEARCH COPYRIGHT 2002 ISI (R)

AB We used an assay based on the uptake of SYTOX Green, an organic compound that fluoresces upon interaction with nucleic acids and penetrates cells with compromised plasma membranes, to investigate membrane permeabilization in fungi. Membrane permeabilization induced by **plant** defensins in *Neurospora crassa* was biphasic, depending on the **plant** defensin dose. At high defensin levels (10 to 40 μM), strong permeabilization was detected that could be strongly suppressed by cations in the medium. This permeabilization appears to rely on direct peptide-phospholipid interactions. At lower defensin levels (0.1 to 1 μM), a weaker, but more cation-resistant, permeabilization occurred at concentrations that correlated with the inhibition of fungal growth. Rs-**AFP2** (Y38G), an inactive variant of the **plant** defensin Rs-**AFP2** from *Raphanus sativus*, failed to induce cation-resistant permeabilization in *N. crassa*, Dm-**AMP1**, a **plant** defensin from *Dahlia merckii*, induced cation-resistant membrane permeabilization in yeast (*Saccharomyces cerevisiae*) which correlated with its antifungal activity. However,

Dm-AMP1 could not induce cation-resistant permeabilization in the Dm-AMP1-resistant *S. cerevisiae* mutant DM1, which has a drastically reduced capacity for binding Dm-AMP1. We think that cation-resistant permeabilization is binding site mediated and linked to the primary cause of fungal growth inhibition induced by **plant** defensins.

=> d 1-4

L8 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2002 ACS  
AN 2000:314810 CAPLUS  
DN 132:344450  
TI Peptides with enhanced stability to protease degradation useful in the control of **plant** diseases  
IN Everett, Nicholas P.; Li, Qingshun; Lawrence, Christopher; Davies, Maelor H.  
PA Interlink Biotechnologies LLC, USA; University of Kentucky Research Foundation  
SO PCT Int. Appl., 50 pp.  
CODEN: PIXXD2  
DT Patent  
LA English  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000026344	A1	20000511	WO 1999-US25561	19991029
	W: AT, AU, BR, CA, JP, MX				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	AU 2000037884	A5	20000522	AU 2000-37884	19991029
	BR 9914922	A	20010710	BR 1999-14922	19991029
PRAI	US 1998-106373	P	19981030		
	US 1998-106537	P	19981102		
	US 1998-106573	P	19981002		
	WO 1999-US25561	W	19991029		
OS	MARPAT 132:344450				
RE.CNT	7	THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD			
		ALL CITATIONS AVAILABLE IN THE RE FORMAT			

L8 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2002 ACS  
AN 1999:595213 CAPLUS  
DN 131:213188  
TI A process for isolating and purifying viruses, soluble proteins and peptides from **plant** sources including transgenic plants  
IN Garger, Stephen J.; Holtz, R. Barry; McCulloch, Michael J.; Turpen, Thomas H.  
PA Biosource Technologies, Inc., USA  
SO PCT Int. Appl., 58 pp.  
CODEN: PIXXD2  
DT Patent  
LA English  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9946288	A2	19990916	WO 1999-US5056	19990309
	WO 9946288	A3	20000120		
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				

US 6037456	A	20000314	US 1998-37751	19980310
US 6033895	A	20000307	US 1999-259741	19990225
AU 9930725	A1	19990927	AU 1999-30725	19990309
EP 1062235	A2	20001227	EP 1999-912327	19990309
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 2002506080	T2	20020226	JP 2000-535664	19990309
US 6303779	B1	20011016	US 1999-466422	19991217
PRAI US 1998-37751	A	19980310		
US 1999-259741	A1	19990225		
WO 1999-US5056	W	19990309		

L8 ANSWER 3 OF 4 SCISEARCH COPYRIGHT 2002 ISI (R)  
 AN 2001:871287 SCISEARCH  
 GA The Genuine Article (R) Number: 487FW  
 TI Structure-function relationships in the tryptophan-rich, antimicrobial peptide **indolicidin**  
 AU Staubitz P; Peschel A; Nieuwenhuizen W F; Otto M; Gotz F; Jung G; Jack R W (Reprint)  
 CS City Univ Hong Kong, Dept Biol & Chem, Ctr Coastal Pollut & Conservat, 83 Tat Chee Ave, Kowloon, Hong Kong, Peoples R China (Reprint); Univ Tubingen, Inst Organ Chem, D-72074 Tubingen, Germany; EMC Microcollect GmbH, Tubingen, Germany  
 CYA Peoples R China; Germany  
 SO JOURNAL OF PEPTIDE SCIENCE, (OCT 2001) Vol. 7, No. 10, pp. 552-564. Publisher: JOHN WILEY & SONS LTD, BAFFINS LANE CHICHESTER, W SUSSEX PO19 1UD, ENGLAND.  
 ISSN: 1075-2617.  
 DT Article; Journal  
 LA English  
 REC Reference Count: 43  
 \*ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS\*

L8 ANSWER 4 OF 4 SCISEARCH COPYRIGHT 2002 ISI (R)  
 AN 1999:949078 SCISEARCH  
 GA The Genuine Article (R) Number: 261XV  
 TI Permeabilization of fungal membranes by **plant** defensins inhibits fungal growth  
 AU Thevissen K; Terras F R G; Broekaert W F (Reprint)  
 CS KATHOLIEKE UNIV LEUVEN, FA JANSSENS LAB GENET, K MERCIERLAAN 92, B-3001 EVERLEE, BELGIUM (Reprint); KATHOLIEKE UNIV LEUVEN, FA JANSSENS LAB GENET, B-3001 EVERLEE, BELGIUM  
 CYA BELGIUM  
 SO APPLIED AND ENVIRONMENTAL MICROBIOLOGY, (DEC 1999) Vol. 65, No. 12, pp. 5451-5458. Publisher: AMER SOC MICROBIOLOGY, 1325 MASSACHUSETTS AVENUE, NW, WASHINGTON, DC 20005-4171.  
 ISSN: 0099-2240.  
 DT Article; Journal  
 FS LIFE; AGRI  
 LA English  
 REC Reference Count: 34  
 \*ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS\*